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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,278	09/13/2005	Tsutomu Reiba	277751US0PCT	2455
22850	7590	04/15/2009	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			WEDDLE, ALEXANDER MARION	
		ART UNIT	PAPER NUMBER	
		1792		
		NOTIFICATION DATE		DELIVERY MODE
		04/15/2009		ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/549,278	<b>Applicant(s)</b> REIBA ET AL.
	<b>Examiner</b> ALEXANDER WEDDLE	<b>Art Unit</b> 1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 23 December 2008.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 9 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 9 and 11-13 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-146/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 9 and 11-13 have been considered but are moot in view of the new ground(s) of rejection necessitated by amendment.

### ***Claim Objections***

2. Claim 11 is objected to because of the following informalities: The last line recites "q represents an integer of from 0 to 2" and the formula uses the reference character "p" instead of "q.". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima et al. (US 2002/0042461) in view of Otsuki T. et al. ("Development of Hydrogenated Ring-Opening Metathesis Polymers").

Regarding Claim 9, Oshima et al. (US'461) teach a method for treatment of a film comprising bringing a film or sheet containing a cyclic olefin-based polymer into contact with a gas comprising a superheated water vapor ("superheated steam"), wherein the cyclic olefin based polymer is a cyclic olefin based polymer comprising a structural unit formed from a "specific cyclic olefin," wherein, A<sup>1</sup> – A<sup>4</sup> ("B<sup>1</sup>-B<sup>4</sup>" in the reference) each independently represents a hydrogen atom, a halogen atom, an alkyl group, *inter alia*, and p represents an integer from 0-2 (pars. 0020, 0098, 0260, 0261, 0317, and 0318; formula (2')).

US'461 fails to teach the cyclic olefin based polymer comprising a structural unit (b) represented by the formula (1-2) in Claim 1. Otsuki et al. teach the cyclic olefin based polymer comprising the structural unit (b) represented by the formula (1-2) in Claim 1 and demonstrate its formation from the "specific cyclic olefin" (p. 4662, Scheme 1). It would have been obvious to a person of ordinary skill in the art at the time of invention to modify the process of US'461 by polymerizing the "specific cyclic olefin"

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taught by Otsuki et al. to obtain the cyclic olefin based polymer comprising structural unit (b) taught by Otsuki et al. for treating a film or sheet, because Otsuki et al. teach that structural unit (b) is a heat-resistant transparent resin with excellent optical properties and is used advantageously in optical applications (p. 4661, right column, first full paragraph and p. 4668, left column, last sentence).

Regarding Claim 11, US'461 teaches that the film comprises a cyclic olefin-based polymer, formed from the "specific cyclic olefin," wherein B<sup>1</sup> to B<sup>4</sup> independently, or individually, represent a hydrogen atom, a hydrocarbon group (e.g., an alkyl group), having 1 to 20 carbons, and a hydrolyzable silyl group (e.g., alkoxy silyl), etc, and at least one of A<sup>1</sup> to A<sup>4</sup> represents a hydrolyzable silyl group; and p ("m" or "q") is 0 or 1 (pars. 0018-0019, 0098; Formula (2)', p. 4). US'461 teaches that the cyclic olefin polymer contains a recurring unit (a) and a recurring unit (b) which are polymerized by the same mechanism, where (a) and (b) differ in that at least one functional group B<sup>1</sup>-B<sup>4</sup> must be a hydrolysable silyl group (Y may represent- CH<sub>2</sub>--) (pars. 0036-0039). US'461 in view of Otsuki et al. fails to teach that the cyclic olefin based polymer comprises the structural unit (b) according to formula (1-2) and a structural unit (d) represented by the formula (2-2). It would have been obvious to the person of ordinary skill in the art at the time of invention to modify the process of US'461 in view of Otsuki et al. by forming a cyclic olefin based polymer comprising structural unit (b) and structural unit (d), because US'461 suggests that copolymers formed from the "specific cyclic olefin" and which polymerize by the same mechanism (in this case hydrogenated ring-opening polymerization) can be combined to produce a cross-linked material via

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siloxane bonds with excellent optical transparency, mechanical and thermal stability with good adhesion (Abstract) and because Otsuki et al. suggest that the structural units can be used as the copolymer units to provide excellent optical and heat-resistance properties (p. 4661, right column, first full paragraph and p. 4668, left column, last sentence).

Regarding Claim 12, US'461 teaches a method for treatment of a film or sheet using the cyclic olefin based polymer of Claim 11 where a compound capable of generating an acid at the treatment temperature is used simultaneously (pars. 0018-0020, 0023-0025, 0196-0197, 0200).

Regarding Claim 13, US'461 teaches treating the film or sheet according to Claim 9 with superheated water vapor (i.e. superheated steam), for example steam at 150 °C and 1 atm or steam up to 300 °C (pars. 0200, 0318).

Claims 9 and 11-13 are obvious absent evidence to the contrary.

#### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER WEDDLE whose telephone number is (571) 270-5346. The examiner can normally be reached on Monday-Thursday, 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on (571)272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. W./

Examiner, Art Unit 1792

/Michael Kornakov/

Supervisory Patent Examiner, Art Unit 1792